ABSTRACT

A distributed multiprocessor server system and a set of steps performed by the server system are disclosed that facilitate efficient handling of a potentially large workload arising from request messages received from users via a communicatively

5   coupled network link. Workload requests are initially received by a default processor. The default processor redirects at least a portion of the workload request, based upon the type of request, to a specialized processor in a set of special purpose handler processors. Once delegated by a default processor, the request (or a portion thereof) is completed by the specialized handler processor to which the request was delegated. Communications

10   thereafter proceed between the handler processor and a network interface without passing through the default processor.

The disclosed server system includes an intelligent switch. The intelligent switch comprises logic components for identifying a new request received via the network interface in the form of a message packet and passed from the network interface to the

15   intelligent switch.

The default handler is programmed to: receive the new request from the intelligent switch, associate a request type with the new request, identify a handler processor from a set of specialized handler processors for executing at least a portion of the new request based upon the request type, and issue a message reassigning the new request to the

20   identified handler processor. The identification and delegation need not be done based on the initial request packet, nor do they need to delegate the entire interaction until completion. The default handler may delegate work at any point during the interaction, and for any specified portion of it.

The disclosed system further includes a bus structure communicatively linking the set of specialized handler processors to the intelligent switch and request reassignment tracking logic enabling the intelligent switch to route received messages associated with the reassigned request to the identified handler processor. This arrangement facilitates

5   direct communications between the set of specialized handler processors and the network interface via the intelligent switch after a request has been reassigned from the default processor to one of the specialized handler processors.

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